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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/658,259	09/10/2003	Hitoshi Sato	953.1010	4011

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EXAMINER

TRAN, DIEM T

ART UNIT PAPER NUMBER

3748

DATE MAILED: 07/01/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

SP

Office Action Summary	Application No. 10/658,259	Applicant(s) SATO ET AL.	
	Examiner Diem Tran	Art Unit 3748	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on RCE filed on 5/2/05.
- 2a) ☐ This action is FINAL.
- 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5 is/are pending in the application.
 - 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☒ All b) ☐ Some * c) ☐ None of:
 - 1. ☒ Certified copies of the priority documents have been received.
 - 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

This office action is in response to the RCE filed on 5/2/05. As instructed by the RCE, an amendment filed on 5/2/05 has been entered. In this amendment, claims 1, 5 have been amended. Overall, claims 1-5 are pending in this application.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 2, 5 are rejected under 35 U.S.C. 102(b) as being anticipated by Ludecke et al. (US Patent 4,211,075).

Regarding claims 1, 2, 5, Ludecke discloses an internal combustion engine exhaust gas purifying system having a continuous regenerating diesel particulate filter system in an exhaust passage of an internal combustion engine to oxidize and remove collected particulate matter by performing a regenerating-mode operation when a quantity of the collected particulate matter in a filter of the filter system to collect the particulate matter is equal to a predetermined judgment value for regeneration, comprising:

collected-quantity estimation means for estimating the quantity of collected particulate matter in the filter (see col. 4, lines 9-11, 24-30); and maximum-fuel-injection-quantity restricting means for restricting a maximum fuel injection quantity of the internal combustion engine when the quantity of the collected particulate matter estimated by the collected-quantity

estimation means is equal to a predetermined judgment value for restriction, the maximum fuel injection quantity restricting means restricting the maximum fuel injection quantity during the regeneration mode operation (see col. 6, lines 6-15).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ludecke et al. (US Patent 4,211,075) in view of Sato et al. (US Patent 4,535,588).

Ludecke discloses all the claimed limitations as discussed in claim 1 above, however, fails to disclose that the collected-quantity estimation means estimates the quantity of collected particulate matter in accordance with the differential pressure between the upstream and downstream of the filter. Sato teaches that it is conventional in the art, to estimate the quantity of collected particulate matter in accordance with the differential pressure between the upstream and downstream of the filter (see col. 5, lines 20-30).

It would have been obvious to one having ordinary skill in the art at the time the invention was made, to have utilized the teaching of Sato in the Ludecke system, since the use thereof would have provided a means for initiating the regeneration of the filter.

Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ludecke et al. (US Patent 4,211,075) in view of Kuenstler et al. (JP 2002-195086).

Ludecke discloses all the claimed limitations as discussed in claim 1 above, however, fails to disclose that the continuous regenerating diesel particulate filter system uses a system constituted by setting an oxidation catalyst to the upstream side of the filter. Kuenstler teaches that it is conventional in the art, to utilize a continuous regenerating diesel particulate filter system comprising an oxidation catalyst (9) located on the upstream side of the filter (10) (see Figure 1).

It would have been obvious to one having ordinary skill in the art at the time the invention was made, to have utilized the teaching of Kuenstler in the Ludecke system, since the use thereof would have provided a means to increase the temperature of the particulate filter.

Response to Arguments

Applicant's arguments filed on 5/2/05 have been fully considered but they are not deemed persuasive. The Applicant argued that the Ludecke reference fails to disclose the time for beginning the restriction of fuel injection quantity can occur during or not during the period of regeneration. The Examiner respectfully disagrees, since the Ludecke reference discloses restricting the maximum fuel injection quantity during the regeneration mode operation (see col. 6, lines 6-15).

Conclusion

Any inquiry concerning this communication from the examiner should be directed to Examiner Diem Tran whose telephone number is (571) 272-4866. The examiner can normally be reached on Monday -Friday from 8:00 a.m. - 5:30p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas E. Denion, can be reached on (571) 272-4859. The fax number for this group is (703) 872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

DT
June 24, 2005



Diem Tran
Patent Examiner
Art unit 3748



THOMAS DENION
SUPERVISORY PATENT EXAMINER
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